

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A battery operated LED lighting apparatus comprising:

one or more connectors or terminals for receiving a battery voltage
~~outputting output by a battery voltage;~~

~~[[a]]~~ at least one light emitting diode; and

a power supply including a boost regulating circuit, said power supply in communication with said battery and said at least one light emitting diode such that a constant voltage is continuously supplied to said at least one light emitting diode as said battery discharges, wherein over at least a portion of said discharge cycle said constant voltage is higher than said battery voltage.

2. (Currently Amended) The battery operated LED lighting apparatus of claim 1 wherein said at least one light emitting diode comprises a plurality of light emitting diodes segregated into groups, said groups connected in parallel, wherein the light emitting diodes in ~~[[and]]~~ each group ~~of said plurality of groups comprising a plurality of light emitting diodes~~ are connected in series.

3. (Currently Amended) The battery operated LED lighting apparatus of claim 2 wherein said each group further includes a ballasting **[[device]] element** connected in series with said plurality of light emitting diodes connected in series.

4. (Currently Amended) The battery operated LED lighting apparatus of claim 3 wherein said ballasting **[[device is]] element comprises** a resistor.

5. (Original) The battery operated LED lighting device of claim 1 wherein said power supply further comprises a buck regulator and wherein over a portion of said discharge cycle said battery voltage is greater than said constant voltage and said buck regulator is operative to regulate said battery voltage at said constant voltage.

6. (Currently Amended) A battery operated LED lighting apparatus comprising:

one or more connectors or terminals for receiving a battery voltage
~~outputting output by a battery voltage~~;

[[a]] at least one light emitting diode;

a power supply including a boost regulating circuit, said power supply in communication with said battery to produce an output voltage to said at least one light emitting diode such that a constant direct current is continuously supplied to said at least one light emitting diode as said battery discharges wherein over at

least a portion of said discharge cycle said output voltage is higher than said battery voltage.

7. (Currently Amended) The battery operated LED lighting apparatus of claim 6 wherein said at least one light emitting diode comprises a plurality of groups of light emitting diodes connected in series, said groups being connected in parallel ~~and each group of said plurality of groups comprising a plurality of light emitting diodes connected in series.~~

8. (Currently Amended) The battery operated LED lighting apparatus of claim 7 wherein said each group further includes a ballasting **[[device]]** element connected in series with said plurality of light emitting diodes connected in series, each ballasting element having a value such that the level of direct current drawn by each group is substantially identical.

9. (Original) The battery operated LED lighting device of claim 6 wherein said power supply further comprises a buck regulator and wherein over a portion of said discharge cycle said battery voltage is greater than said output voltage and said buck regulator is operative to regulate said battery voltage at said output voltage to produce a constant current through said light emitting diode.

10. (New) A LED lighting apparatus suitable to provide proper illumination for lighting of a subject in film, video, or digital imaging, comprising:

a light emitting diode for providing a continuous source of primary illumination for a subject; and

a switch-mode regulator circuit having an input and a first output, said first output in communication with said light emitting diode such that when said input receives a first voltage, said first output provides a constant output to said light emitting diode.

11. (New) The LED lighting apparatus of claim 10 wherein said switch-mode regulator comprises a boost regulator.

12. (New) The LED lighting apparatus of claim 10 wherein said switch-mode regulator comprises a buck regulator.

13. (New) The LED lighting apparatus of claim 10 wherein said switch-mode regulator comprises a buck/boost regulator.

14. (New) The LED lighting apparatus of claim 10 wherein said constant output comprises a constant voltage.

15. (New) The LED lighting apparatus of claim 10 wherein said constant output comprises a constant current.

16. (New) The LED lighting apparatus of claim 10 where said constant output comprises a constant power.

17. (New) The LED lighting apparatus of claim 10, wherein said first voltage is a DC voltage.

18. (New) The LED lighting apparatus of claim 10, wherein said first voltage is provided by a battery.

19. (New) The LED lighting apparatus of claim 10, wherein said first voltage comprises, or is derived from, an AC voltage.

20. (New) The LED lighting apparatus of claim 10, wherein said constant output comprises a DC current.

21. (New) The LED lighting apparatus of claim 10, further comprising a microprocessor configured to control said switch-mode regulator circuit.

22. (New) The LED lighting apparatus of claim 21, wherein the microprocessor is configured to monitor the power load requirements of said light emitting diode, and is further programmed to maintain said constant output based on said power load requirements.

23. (New) The LED lighting apparatus of claim 22 wherein said constant output comprises a constant voltage.

24. (New) The LED lighting apparatus of claim 22 wherein said constant output comprises a constant current.

25. (New) The LED lighting apparatus of claim 10 further comprising a power supply which provides a second voltage to said input.

26. (New) The LED lighting apparatus of claim 25 wherein said power supply comprises a battery.

27. (New) The LED lighting apparatus of claim 26 wherein said switch-mode regulator comprises a buck/boost regulator and wherein over a first portion of a discharge cycle of said battery, said second voltage is greater than said constant output such that said switch-mode regulator operates in a buck mode and over a second portion of said discharge cycle of said battery, said second voltage is less than said constant output such that said switch-mode regulator operates in a boost mode.

28. (New) The LED lighting apparatus of claim 25 wherein said power supply comprises an AC input to receive power from an AC electrical outlet.

29. (New) The LED lighting apparatus of claim 10, further including manually-operable variable intensity control circuit, such that the light output from the light emitting diode can be varied in brightness.

30. (New) The LED lighting apparatus of claim 10, wherein said constant output is provided by said first output to said light emitting diode as said first DC voltage decays over time.

31. (New) A battery-powered lighting apparatus suitable to provide proper illumination for lighting of a subject in film, video, or digital imaging,, comprising:

a plurality of light emitting diodes for illuminating a subject to be filmed or imaged; and

a switch-mode regulator circuit configured to receive a first input voltage derived from a battery, and having a first output in communication with said light emitting diode to provide a continuous voltage output to the light emitting diodes.

32. (New) The battery-powered lighting apparatus of claim 31, wherein said light emitting diodes are segregated into groups, each group comprising a plurality of said light emitting diodes connected serially, said groups being connected in parallel.

33. (New) The battery-powered lighting apparatus of claim 32, further comprising a ballast element in series with each group, each ballasting element having a value such that a level of direct current drawn by each group is substantially identical.

34. (New) The battery-powered lighting apparatus of claim 33, wherein said ballasting element comprises a resistor.

35. (New) The battery-powered lighting apparatus of claim 33, wherein said ballasting element comprises an inductor.

36. (New) The battery-powered lighting apparatus of claim 33, wherein said ballasting element comprises a transistor having a fixed operational current established at least in part by a zener diode.

37. (New) The battery-powered lighting apparatus of claim 31, wherein an intensity level of said light emitting diodes is manually adjustable.

38. (New) The battery-powered lighting apparatus of claim 31, wherein said light emitting diodes are controlled to operate at a substantially constant current corresponding to the selected intensity level.

39. (New) The battery operated LED lighting device of claim 1, further comprising a dimmer control such that the intensity of the at least one light emitting diode is adjustable.

40. (New) The battery operated LED lighting device of claim 6, further comprising a dimmer control such that the intensity of the at least one light emitting diode is adjustable.